Rev	Description	Date	Drawn	Chk'd
AA	Plots 267-268 moved 500mm closer towards Plot 269.	25.04.17	SJN	
Z	Layout updated to account for Plots 276-278 being handed. Plots 276 & 277 changed from Type 4B to 4Bx. Type 4Bx is a plot by mirror from Plot 267, 268 & 270 and Plot 267 has moved 500mm closer towards 40 Cairo Lane.	20.04.17	SJN	
Y	Layout updated to account for new pipe and stays for the overhead wires opposite Plots 33-24.	17.03.17	SJN	
X	Layout updated to account for Detached, Ends and Mid's being added to House type schedule.	22.07.16	BMG	
W	Plots 1-6 reconfigured, Plots 75-81 moved 1m towards Plot 74, Plot 238 moved 1m away from Plot 235 and Plots 229-231 moved towards Plot 225.	20.06.16	SJN	
V	Updated to suit Dhillon comments.	24.05.16	SJN	
U	Updated to suit Dhillon comments.	18.05.16	SJN	
T	Generally updated.	27.04.16	SJN	
S	Layout updated with new Barratt 2016 Range.	07.04.16	SJN	
R	Additional spaces added to Plots 11 & 12. Footpaths and lane added.	21.01.16	PJL	

Urban Design
Barratt House
Forest Business Park
Bardon Hill
Leicestershire
LE67 1UB

01530 276276

Project

Cudworth

Land at Carrs Lane and Newland Avenue

Drawing Title

Proposed Site Layout

Scale
1:500 @ A0

Date
06.07.15

Drawn By
SJW

Drawing Ref
YW-04-03 AA

BARRATT HOMES

Within printing to scale, please ensure that your plotting settings are set to Page Scaling 'None. Do not allow any fit to page' settings as this will alter the scale of the drawing. You can use the scale bar or grid to check for correct drawing.

Disclaimer

Images and site layout are intended for illustrative purposes only and should be treated as general guidance only.

Site layout including parking arrangements, (social/ affordable housing, community buildings, play areas and public open spaces) may change to reflect changes in the planning permission for the development. Please speak to your solicitor to whom full details of any planning consents including layout plans will be available.

Site layouts and landscaping are not intended to form part of any contract or warranty unless specifically incorporated in writing into the contract.

(The name of this development is a marketing name only and may not be the designated postal address, which may be determined by The Post Office).

Schedule of Accommodation

House Type	No.	Sq. Ft.	Total
Private			
Washington - End	15	615	9225
Washington - Mid	1	615	615
Hallon	13	1268	16484
Maidstone - End	22	830	18260
Maidstone - Mid	8	830	6640
Folkstone - End	44	830	36520
Folkstone - Mid	5	830	4150
Windermere	19	1074	20406
Ennerdale - Det	15	915	13740
Ennerdale - End	10	916	9160
Chester	9	1032	9288
Kingsley	29	1075	31291
Eskdale - Det	6	1058	6348
Eskdale - End	8	1058	8464
Ripon	12	1120	13440
Radleigh	24	1316	31584
Aldemey	23	1225	28175
Total	**283**		**263790**
Bungalows			
Alford	9	800	7200
Beadle - End	6	594	3564
Total	**15**		**10764**
Combined Total	**278**		**274,554**
Gross Site Area	28.70		Acres
Nett Developable Area	19.60		Acres
Scheme Density	14.18		Dwellings/Acre
Scheme Coverage	14008		SQ FT /Acre

Legend

- Large garage (Ref: GW421)
- Proposed dwelling and house type code
- Denotes door position(s)
- Denotes gable & additional windows to habitable rooms
- Denotes handing of plot
- 1800mm high screen wall
- 1800mm high close board timber fence
- 450mm high timber knee-rail fence
- 900mm high metal rail fence
- 1500mm 4 bar timber rail fence
- Boundary treatment E:
- Boundary treatment F:
- Soft landscaping within privately deeded areas
- Soft landscaping areas within POS
- Proposed trees shown indicatively
- Existing landscaping retained

For further information relating to housetype proposals please refer to individual the housetype plans & elevations

For further information relating to proposed boundary treatments please refer to the proposed boundary treatments layout and boundary treatment details sheet

For further details relating to soft landscaping proposals please refer to the proposed landscape layout

Existing features retained shown indicatively and retention subject to survey

Scale Bar

0m 5m 10m 15m 20m 25m 30m 35m 40m 45m 50m 60m 70m 80m 90m 100m

A P P E N D I X G

INDICATIVE SURFACE WATER DRAINAGE CALCULATIONS

Summary of Results for 100 year Return Period (+30%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Outflow (l/s)	Max Volume (m³)	Status
15 min Summer	100.435	0.435	37.5	0.0	37.5	780.2	O K
30 min Summer	100.571	0.571	37.5	0.0	37.5	1024.7	O K
60 min Summer	100.703	0.703	37.5	0.0	37.5	1261.8	O K
120 min Summer	100.813	0.813	37.5	0.0	37.5	1458.4	O K
180 min Summer	100.849	0.849	37.5	0.0	37.5	1524.1	O K
240 min Summer	100.853	0.853	37.5	0.0	37.5	1530.7	O K
360 min Summer	100.822	0.822	37.5	0.0	37.5	1475.1	O K
480 min Summer	100.793	0.793	37.5	0.0	37.5	1423.8	O K
600 min Summer	100.768	0.768	37.5	0.0	37.5	1379.4	O K
720 min Summer	100.746	0.746	37.5	0.0	37.5	1338.8	O K
960 min Summer	100.702	0.702	37.5	0.0	37.5	1259.4	O K
1440 min Summer	100.613	0.613	37.5	0.0	37.5	1100.3	O K
2160 min Summer	100.485	0.485	37.5	0.0	37.5	869.7	O K
2880 min Summer	100.368	0.368	37.5	0.0	37.5	660.8	O K
4320 min Summer	100.184	0.184	37.5	0.0	37.5	329.8	O K
5760 min Summer	100.067	0.067	37.5	0.0	37.5	120.7	O K
7200 min Summer	100.010	0.010	37.5	0.0	37.5	17.8	O K
8640 min Summer	100.000	0.000	34.2	0.0	34.2	0.0	O K
10080 min Summer	100.000	0.000	30.2	0.0	30.2	0.0	O K
15 min Winter	100.489	0.489	37.5	0.0	37.5	878.5	O K
30 min Winter	100.645	0.645	37.5	0.0	37.5	1158.7	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)
15 min Summer	116.878	0.0	778.1	0.0	23
30 min Summer	78.200	0.0	1051.0	0.0	37
60 min Summer	49.937	0.0	1379.9	0.0	66
120 min Summer	30.810	0.0	1708.4	0.0	126
180 min Summer	22.897	0.0	1906.4	0.0	186
240 min Summer	18.424	0.0	2045.8	0.0	244
360 min Summer	13.506	0.0	2251.6	0.0	342
480 min Summer	10.835	0.0	2409.2	0.0	396
600 min Summer	9.126	0.0	2536.7	0.0	458
720 min Summer	7.927	0.0	2644.2	0.0	524
960 min Summer	6.342	0.0	2820.2	0.0	660
1440 min Summer	4.622	0.0	3080.6	0.0	928
2160 min Summer	3.362	0.0	3389.4	0.0	1324
2880 min Summer	2.679	0.0	3598.9	0.0	1704
4320 min Summer	1.942	0.0	3901.4	0.0	2424
5760 min Summer	1.544	0.0	4159.2	0.0	3072
7200 min Summer	1.291	0.0	4350.5	0.0	3704
8640 min Summer	1.116	0.0	4517.9	0.0	0
10080 min Summer	0.987	0.0	4662.1	0.0	0
15 min Winter	116.878	0.0	874.5	0.0	22
30 min Winter	78.200	0.0	1180.8	0.0	37

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Summary of Results for 100 year Return Period (+30%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Overflow (l/s)	Max Outflow (l/s)	Max Volume (m³)	Status
60 min Winter	100.799	0.799	37.5	0.0	37.5	1434.9	O K
120 min Winter	100.932	0.932	37.5	0.0	37.5	1673.4	O K
180 min Winter	100.984	0.984	37.5	0.0	37.5	1767.0	O K
240 min Winter	101.000	1.000	37.5	0.0	37.5	1795.8	O K
360 min Winter	100.989	0.989	37.5	0.0	37.5	1774.8	O K
480 min Winter	100.952	0.952	37.5	0.0	37.5	1708.1	O K
600 min Winter	100.910	0.910	37.5	0.0	37.5	1633.7	O K
720 min Winter	100.880	0.880	37.5	0.0	37.5	1580.4	O K
960 min Winter	100.817	0.817	37.5	0.0	37.5	1465.7	O K
1440 min Winter	100.680	0.680	37.5	0.0	37.5	1220.3	O K
2160 min Winter	100.480	0.480	37.5	0.0	37.5	862.3	O K
2880 min Winter	100.306	0.306	37.5	0.0	37.5	548.4	O K
4320 min Winter	100.058	0.058	37.5	0.0	37.5	104.2	O K
5760 min Winter	100.000	0.000	34.2	0.0	34.2	0.0	O K
7200 min Winter	100.000	0.000	28.6	0.0	28.6	0.0	O K
8640 min Winter	100.000	0.000	24.7	0.0	24.7	0.0	O K
10080 min Winter	100.000	0.000	21.8	0.0	21.8	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Overflow Volume (m³)	Time-Peak (mins)
60 min Winter	49.937	0.0	1549.2	0.0	66
120 min Winter	30.810	0.0	1915.3	0.0	124
180 min Winter	22.897	0.0	2136.8	0.0	182
240 min Winter	18.424	0.0	2293.3	0.0	240
360 min Winter	13.506	0.0	2523.2	0.0	350
480 min Winter	10.835	0.0	2699.7	0.0	454
600 min Winter	9.126	0.0	2842.4	0.0	492
720 min Winter	7.927	0.0	2962.8	0.0	562
960 min Winter	6.342	0.0	3159.6	0.0	718
1440 min Winter	4.622	0.0	3451.6	0.0	1014
2160 min Winter	3.362	0.0	3797.8	0.0	1428
2880 min Winter	2.679	0.0	4033.2	0.0	1796
4320 min Winter	1.942	0.0	4376.4	0.0	2428
5760 min Winter	1.544	0.0	4668.8	0.0	0
7200 min Winter	1.291	0.0	4881.0	0.0	0
8640 min Winter	1.116	0.0	5060.1	0.0	0
10080 min Winter	0.987	0.0	5221.5	0.0	0

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.000	Shortest Storm (mins)	15
Ratio R	0.360	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+30

Time Area Diagram

Total Area (ha) 3.750

Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)
0	4	0.000	4	8	3.750

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Model Details

Storage is Offline Dividing Weir Level (m) 101.050
Cover Level (m) 101.500

Tank or Pond Structure

Invert Level (m) 100.000

Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)	Depth (m)	Area (m²)
0.000	1795.0	0.700	1795.0	1.400	0.0	2.100	0.0
0.100	1795.0	0.800	1795.0	1.500	0.0	2.200	0.0
0.200	1795.0	0.900	1795.0	1.600	0.0	2.300	0.0
0.300	1795.0	1.000	1795.0	1.700	0.0	2.400	0.0
0.400	1795.0	1.100	0.0	1.800	0.0	2.500	0.0
0.500	1795.0	1.200	0.0	1.900	0.0		
0.600	1795.0	1.300	0.0	2.000	0.0		

Hydro-Brake Optimum® Outflow Control

Unit Reference	MD-SHE-0260-3750-1050-3750
Design Head (m)	1.050
Design Flow (l/s)	37.5
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Diameter (mm)	260
Invert Level (m)	100.000
Minimum Outlet Pipe Diameter (mm)	300
Suggested Manhole Diameter (mm)	1800

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.050	37.5
Flush-Flo™	0.414	37.5
Kick-Flo®	0.793	32.8
Mean Flow over Head Range	-	30.8

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake Optimum® as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	8.3	1.200	40.0	3.000	62.2	7.000	93.9
0.200	26.7	1.400	43.0	3.500	67.0	7.500	97.1
0.300	36.8	1.600	45.9	4.000	71.5	8.000	100.3
0.400	37.5	1.800	48.6	4.500	75.7	8.500	103.3
0.500	37.2	2.000	51.1	5.000	79.7	9.000	106.2
0.600	36.5	2.200	53.5	5.500	83.5	9.500	109.0
0.800	32.9	2.400	55.8	6.000	87.1		
1.000	36.6	2.600	58.0	6.500	90.6		

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Weir Overflow Control

Discharge Coef 0.544 Width (m) 2.100 Invert Level (m) 101.050

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